

CLAIM OR CLAIMS

What I claim as my invention is:

- [1] An electrical propulsion device comprising a pair of parallel conducting plates, distance "a" apart, each of which comprises an array of conducting segments.
- [2] The propulsion device of claim 1, wherein the 2 parallel plates are a distance "a" apart, separated by a non-conducting medium.
- [3] The propulsion device of claim 1, wherein each plate comprises a set of conducting segments, aligned in a grid structure.
- [4] The propulsion device of claim 1, wherein each conducting segment is of a length "a" equal to the separation of the plates.
- [5] The propulsion device of claim 1, wherein the conducting segments of each plate are pulsed with current I at a frequency dependent on the separation of the plates, "a". The pulsing current is a 1/3 step-wave such that the conducting time (the pulse), p , is 1/3 of the step-wave cycle time. There is no current for the remaining 2/3 of the step-wave cycle. The frequency, f , of the step-wave is given by $f = \frac{c}{3a}$, where c is the speed of light in the non-conducting medium and "a" is the separation of the plates. The period, T , of one cycle of the step-wave, is given by $T = \frac{1}{f}$, and the pulse duration, p , is given by $p = \frac{T}{3}$
- [6] The propulsion device of claim 1, wherein the currents in the two plates are phased one third cycle out of phase.
- [7] The propulsion device of claim 1, wherein each of the two plates has M conducting segments in the x direction, in the direction aligned with the segment;

the segments in the x direction are separated by a distance $(\sqrt{15} - 1)a$. M is fixed for a particular propulsion system, but may vary for different propulsion systems.

- [8] The propulsion device of claim 1, wherein each of the two plates has N elements in the y direction, in the direction orthogonal to the alignment of the segment; the segments in the y direction are separated by a distance $\sqrt{15}a$. N is fixed for a particular propulsion system, but may vary for different propulsion systems.
- [9] The propulsion device of claim 1, wherein the dimensions M and N of each of the two plates may be equal, but they need not be equal.
- [10] The propulsion device of claim 1, wherein the conducting segments, are separated by non-conducting gaps in the direction parallel to current (the x direction), and by gaps normal to the current (the y direction).
- [11] The conducting segments of claim 1, wherein the individual segments may be fabricated from conventional conductors or superconductors.
- [12] The conducting plates of claim 1, wherein the plates are rectangular, but need not be rectangular.
- [13] The propulsion device of claim 1, wherein the application of phased current to the pair of plates causes a one-directional force in the device as a whole.